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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/838,890	04/20/2001	Kai Eck	DE 000066	1656
24737	7590	01/29/2004	EXAMINER	
PHILIPS INTELLECTUAL PROPERTY & STANDARDS P.O. BOX 3001 BRIARCLIFF MANOR, NY 10510			MILLER, RYAN J	
			ART UNIT	PAPER NUMBER
			2621	8

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/838,890

Applicant(s)

ECK ET AL.

Examiner

Ryan J. Miller

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 10 is/are rejected.
- 7) ☒ Claim(s) 8 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 April 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 and 7.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Drawings

1. Figs. 1 and 2 are objected to as depicting a block diagram without “readily identifiable” descriptors of each block, as required by 37 CFR 1.84(n). Rule 84(n) requires “labeled representations” of graphical symbols, such as blocks; and any that are “not universally recognized may be used, subject to approval by the Office, if they are not likely to be confused with existing conventional symbols, and if they are readily identifiable.” In the case of Figs. 1 and 2, all of the blocks are not readily identifiable per se. Each block should have a corresponding label that identifies its function or purpose. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The specification is missing headings for each section. A list of appropriate headings is as follows:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (d) BRIEF SUMMARY OF THE INVENTION.
- (e) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (f) DETAILED DESCRIPTION OF THE INVENTION.
- (g) CLAIM OR CLAIMS (commencing on a separate sheet).
- (h) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Appropriate correction is required.

Claim Objections

3. The following quotation of 37 CFR § 1.75(a) is the basis of objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

4. Claims 1-7 and 10 are objected to under 37 CFR § 1.75 as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Regarding claim 1, the claim language “for the detection of notably image defects” is grammatically awkward and difficult to understand. The examiner suggests changing this limitation to “for the detection of image defects”. Clarification is required.

Regarding claim 7, this claim recites the limitation “the ranking filters” in line 3. There is insufficient antecedent basis for this limitation in the claim. Claim 4 merely recites that the filter unit includes a ranking filter, not multiple ranking filters. Appropriate correction is required.

Regarding claim 10, the claim language “whereas a filtering (37) or clinical image data being performed by means of ranking filters (31) and the filtered data being averaged (35) and a defect table being formed for the sensor elements in dependence on a threshold value (36)” is grammatically awkward and difficult to understand. The examiner recommends a complete revision of this claim.

Claims 2-6 are objected to as depending from an objected to claim.

5. Claims 8 and 9 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 101

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. Claim 10 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 10 calls for a computer program. While such a computer program is functional descriptive material because it imparts functionality when employed as a computer component, it is also non-statutory subject matter. When functional descriptive material is recorded on some type of computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory (see MPEP 2106(IV)(B)(1)). Therefore, the examiner suggests the following (or equivalent language) to overcome this rejection: "A computer-readable medium for storing a computer program for the correction of image data comprising the steps of ...".

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-7 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Schreiner (U.S. Patent No. 5,617,461 A).

As applied to claim 1, Schreiner discloses an X-ray examination apparatus which includes an X-ray source (see Fig. 1: Reference numeral 1 referring to an X-ray tube that produces an X-ray beam.), an X-ray detector including sensor elements for converting X-ray in

electrical charges (see Fig. 1: Reference numeral 5 referring to an X-ray image converter) and a processing unit for the correction of image data and a defect detection unit for the detection of image defects (see Fig. 1: Reference numeral 6 referring to a digital imaging system. This system contains both a processing unit and a defect detection unit.) that can be detected on the basis of image parameters that can be extracted from image data arising during clinical examinations and is suitable to adapt, in dependence on the detected image defects, the processing parameters used in the processing unit (see column 3, lines 49-56: The reference describes that a defect image is produced that identifies the defective image points that need to be corrected by the processing unit. These defective image points are the processing parameters.), characterized in that for the detection of image defects caused by defective sensor elements the defect detection unit includes a filter unit for filtering the image data (see column 4, lines 17-20: The reference describes that images are filtered by a median filter.), and a unit for averaging the filtered image data (see column 4, lines 30-36: The reference describes that a histogram (i.e. an average) is determined for each filter value.), and a comparison unit for comparing the filtered and averaged image data with a threshold value (see column 4, lines 36-38: The reference describes that the defective image points are determined by determining which values lie outside a predetermined region.) in order to form a defect table for the sensor elements in dependence on the threshold value (see column 4, lines 39-41: The reference describes that a defect image (i.e. table) for the sensor elements is formed).

As applied to claim 2, Schreiner discloses that the defect detection unit is arranged to adapt status parameters of the X-ray examination apparatus (see column 3, lines 49-51: The

reference describes that the defect determination procedure determines the defective image points (i.e. adapts status parameters) in the X-ray detector (i.e. examination apparatus).).

As applied to claim 3, Schreiner discloses that continuous detection takes place (see column 3, lines 57-64: The reference describes that a "bright image" is a series of images with uniform exposure (i.e. continuous detection).).

As applied to claim 4, Schreiner discloses that the filter unit includes a ranking filter for filtering the image data, an inverter for inverting image data, and a summing unit for summing the filtered and inverted image data, there also being provided a unit for forming the absolute values of the summed image data (see column 4, lines 16-29: This claim describes an unsharp masking of the image data. This type of unsharp mask is described in the reference. The reference describes the use of a median filter (i.e. a ranking filter) to filter the image data. This filtered image data is subtracted from the original image data. This is equivalent to inverting the image data and summing the filtered and inverted image data. An absolute value of subtracted image data is also obtained.).

As applied to claim 5, Schreiner discloses that that the defect detection unit is arranged to apply a corrected defect table to the processing unit in the case of detection of defective sensor elements (see column 3, lines 49-54: The reference describes that the defect image (i.e. table) produced by the defect determination procedure is used to correct the original X-ray image if defective sensor elements are detected.).

As applied to claim 6, Schreiner discloses that the threshold value is predetermined (see column 4, lines 33-36: The reference describes that the core of the histogram (i.e. threshold) is determined. Therefore, this value is predetermined.).

As applied to claim 7, Schreiner discloses that the ranking filters have variable kernels (see column 5, lines 6-18: The reference describes that the median filter (i.e. ranking filter) can have a variable kernel.).

As applied to claim 10, which merely calls for a computer program for performing the functions of the apparatus described in claim 1, Schreiner discloses such a computer program since all of the processing performed in Schreiner is performed by the digital imaging system 6 (i.e. a computer).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Pourjavid (U.S. Patent No. 6,415,063 B1) is pertinent in that the reference discloses a method for detecting defective pixels in a sensor using an exposed image.

Pourjavid (U.S. Patent No. 6,529,622 B1) is pertinent in that the reference discloses a system for identifying defective regions in an image detector.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Miller whose telephone number is (703) 306-4142. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo H. Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

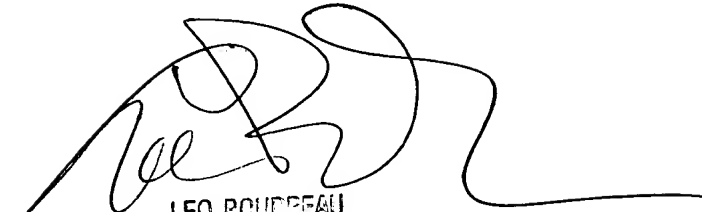
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

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Ryan J. Miller

Ryan J. Miller
Examiner
Art Unit 2621


LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600